U.S. Economy Declines Slightly in October; PMI Slips to 43.4%

OCTOBER REPORT

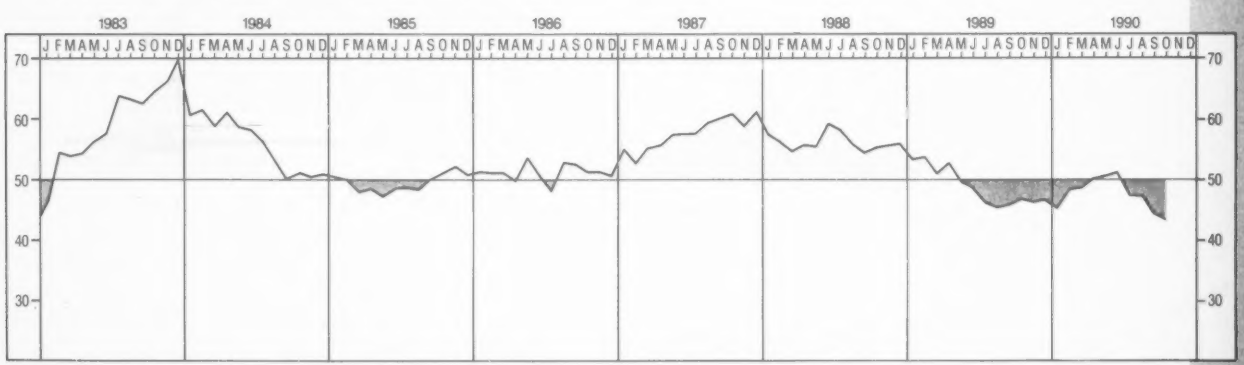
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The U.S. economy declined slightly in October for the first time since December 1982 as the Purchasing Managers' Index slipped below 44% indicating a declining GNP, say the nation's purchasing executives in their latest **Report on Business**. The Production Index declined for the third consecutive month to its lowest level in eight years. The New Orders Index declined in October for the fourth consecutive month and is the lowest since November 1982, the trough of the previous recession. New Export Orders continued to increase although at a lesser rate than in September. Imports declined for the sixth consecutive month although at a lesser rate than last month.

Supplier Deliveries were faster in October for the second consecutive month, mirroring the lower demand resulting from the declining economy. Inventories decreased for the 23rd consecutive month although at a lesser rate than in September. The Employment Index declined for the 20th consecutive month at the greatest rate since May 1985. The Price Index advanced another three points in October to the highest level since August 1988, once again almost entirely as a result of the Middle East crisis.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of materials management at Pitney Bowes, Inc. Said Bretz, "The fourth quarter began like the third quarter ended, with a decline in the manufacturing economy. Virtually all indicators confirmed the growing weakness in manufacturing, which was enough to pull the overall economy into slightly negative growth. With New Orders the weakest in eight years, immediate relief does not appear likely."

PURCHASING MANAGERS' INDEX



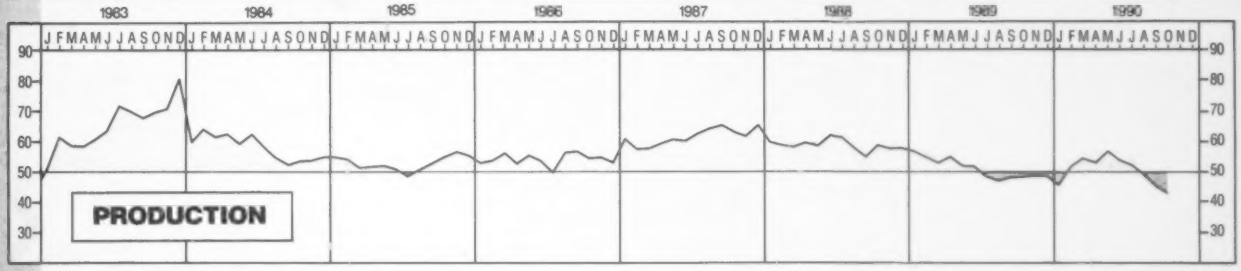
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

October '89	46.9	May '90	50.7
November '89	46.4	June '90	51.1
December '89	46.7	July '90	47.4
January '90	45.2	August '90	47.0
February '90	48.3	September '90	44.4
March '90	48.8	October '90	43.4
April '90	50.2		

The **Purchasing Managers' Index** (PMI) dropped another full point to 43.4%, registering its fourth consecutive decline. The 43.4% is the lowest this leading indicator has reached since December 1982 (42.8%), which was the first complete month of the current economic expansion. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "If the PMI remains unchanged at the October level for the remainder of the year, then past experience indicates this would be consistent with real GNP growth of about 1.0% for all of 1990. The October PMI at 43.4% is slightly below the 44% level signalling a small decline in real GNP."

BUSINESS



Peak — July 1981; Trough — November 1982.

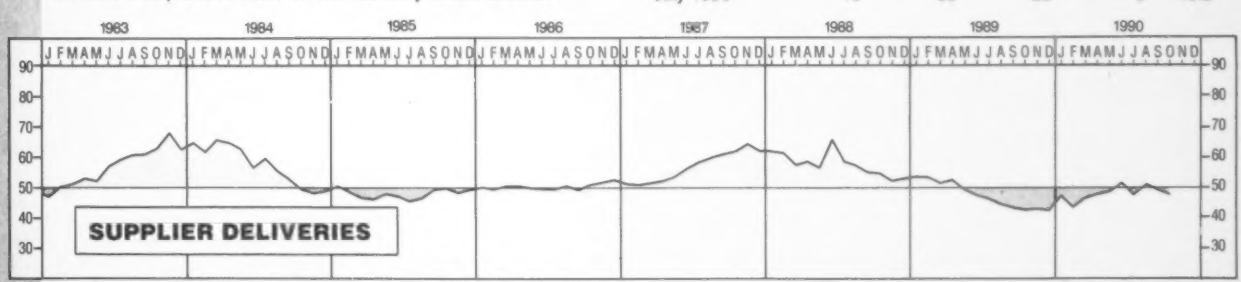
The sharp decline in New Orders in July, August, and September resulted in the third consecutive decline in Production in October. The Production Index fell further to 43.0% in October, down from 45.1% last month and from 56.3% as recently as May 1990. The continued weakness in New Orders suggests no near-term improvement in Production.

Production	%Better	%Same	%Worse	Net	Index
October 1990	17	52	31	−14	43.0
September 1990	23	48	29	− 6	45.1
August 1990	20	54	26	− 6	48.5
July 1990	19	58	23	− 4	52.1

Peak — July 1981; Trough — November 1982.

New Orders declined in October for the fourth consecutive month. The New Orders Index slipped to 43.8%, down from 44.5% in September. The 43.8% is at the lowest in eight years, since November 1982 (41.5%) which was at the trough of the previous recession. This index will have to improve in order for the economy to turn around.

New Orders	%Better	%Same	%Worse	Net	Index
October 1990	19	47	34	−15	43.8
September 1990	23	47	30	− 7	44.5
August 1990	21	49	30	− 9	46.4
July 1990	19	53	28	− 9	46.2



Peak — July 1981; Trough — November 1982.

Supplier Deliveries were faster in October for the second consecutive month, reflecting the slowing demand and apparent lack of any significant shortages. The Supplier Deliveries Index declined to 47.8%, down from 49.4% in September.

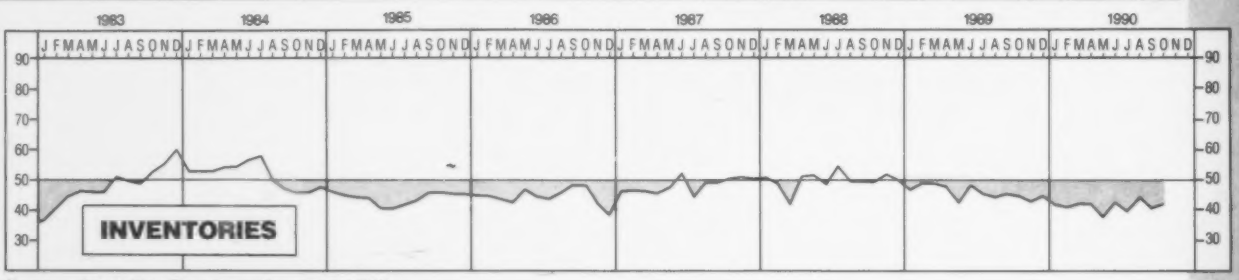
Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
October 1990	9	79	12	− 3	47.8
September 1990	7	85	8	− 1	49.4
August 1990	7	87	6	+ 1	51.1
July 1990	6	83	11	− 5	47.3

IN SHORT SUPPLY

Aluminum Foil; Bearings — 27th consecutive month; **Castings** — 2nd consecutive month; **Caustic Soda/Soda Ash** — 41st consecutive month (used heavily in paper-making, petroleum refining, and soap-making); **Methyl Ethyl Ketone (MEK)** — 2nd consecutive month (used heavily as a chemical solvent in surface coatings and making resins); **Propylene** — Used heavily in making polypropylene plastic and other chemicals; **Styrene** — 4th consecutive month (used chiefly in making synthetic rubber, plastic resins and plastic); **Xylene** — Used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes; **Acetate Filter** — Used in making filter-tip cigarettes.

UP IN PRICE

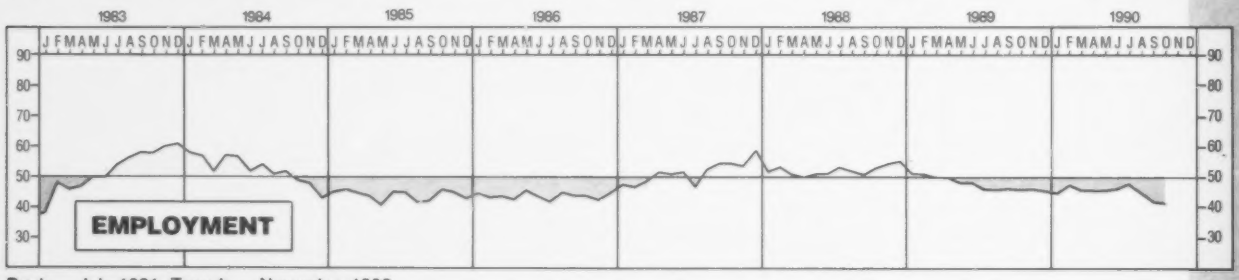
Aluminum — 2nd consecutive month, some reports of price decreases; **Brass; Copper** — 7th consecutive month, some reports of price decreases; **Linerboard; Acetaminophen** — Used in analgesics and making azo dyes and photographic chemicals; **Antifreeze** — 2nd consecutive month; **Ammonia** — Used in manufacturing nitric acid, explosives, synthetic fibers, fertilizers, in refrigeration and the chemical industry; **Alcohols** — 2nd consecutive month; **Acetone** — A solvent for fats, oils, waxes, resins, rubber, plastics, lacquers, and varnishes; **Base Oils** — 2nd consecutive month (used in extracting a variety of chemicals); **Benzene** — 2nd consecutive month (used heavily in making medicinal chemicals, dyes, varnishes, lacquers, and resins); **Caustic Soda/Soda Ash** — 47th consecutive month (used heavily in paper-making, petroleum refining, and soap making); **Ethylene** — 2nd consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Ethylene Glycol** — 2nd consecutive (used heavily in making antifreeze, brake fluid, plastics, paint, and ink); **Methyl Ethyl Ketone** — 2nd consecutive month (used heavily as a chemical solvent in surface coatings and making resins); **Solvents** — 3rd consecutive month (numerous solvents not specifically identified); **Sulfur** — 2nd consecutive month (used heavily in making sulfuric acid, matches, gunpowder, in bleaching wood pulp); **Sulfuric Acid** — 2nd consecutive month (used



Peak — July 1981; Trough — November 1982.

Inventories declined in October for the 23rd consecutive month although at a slightly lesser rate than in September. The Inventories Index rose to 42.0%, up slightly from 40.8% last month. Some members noted they brought in selected commodities earlier than needed in order to delay the impact of announced price increases.

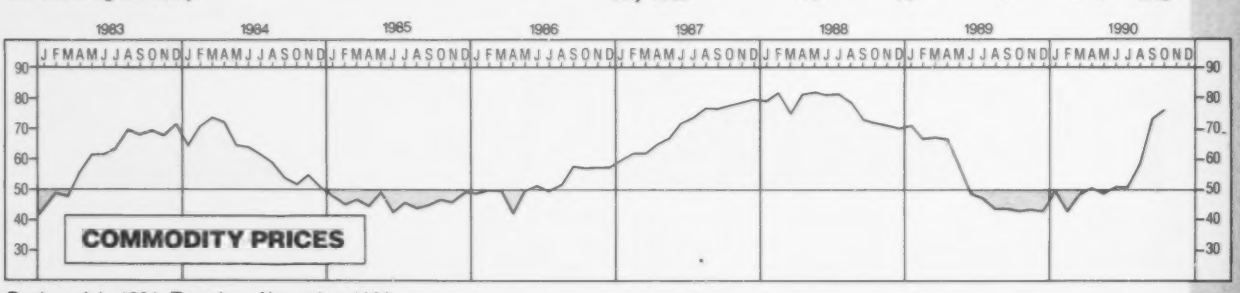
Inventories	%Higher	%Same	%Lower	Net	Index
October 1990	14	53	33	−19	42.0
September 1990	12	59	29	−17	40.8
August 1990	16	57	27	−11	44.1
July 1990	10	55	35	−25	39.3



Peak — July 1981; Trough — November 1982.

Employment declined further in October for the 20th consecutive month. The Employment Index fell to 40.7%, down from 41.5% in September. The 40.7% is the lowest rate since May 1985 (40.4%) and indicates manufacturers continue to adjust employment levels to reflect the declining economy.

Employment	%Higher	%Same	%Lower	Net	Index
October 1990	9	63	28	−19	40.7
September 1990	8	65	27	−19	41.5
August 1990	9	68	23	−14	44.1
July 1990	13	70	17	− 4	47.2



Peak — July 1981; Trough — November 1982.

Prices rose again in October for the fifth consecutive month. The Price Index rose to 76.4%, up from 73.4% in September and 48.5% as recently as May 1990. The surge in the Price Index is virtually 100% attributed to the Middle East crisis and the resulting increase in crude oil, petrochemical feed stocks, and derivatives, such as plastic resins, chemical solvents, and many other chemicals.

Prices	%Higher	%Same	%Lower	Net	Index
October 1990	56	38	6	+50	76.4
September 1990	50	44	6	+44	73.4
August 1990	22	68	10	+12	58.2
July 1990	12	77	11	+ 1	50.9

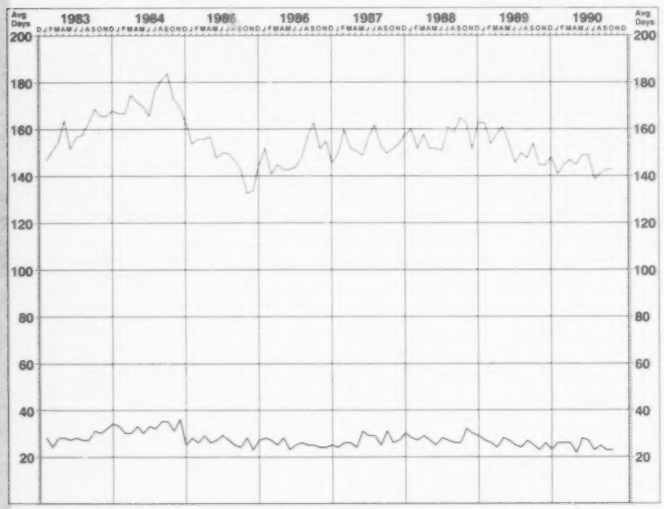
heavily in making fertilizers, dyes, adhesives, and other acids); **Toluene** — 2nd consecutive month (used heavily in making explosives, dyes, and benzoic acid, as a solvent in paint and as a gasoline additive); **Xylene** — 2nd consecutive month (used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes); **Phenol** — used heavily in making phenolic resins; **Plastic Resins** — 2nd consecutive month; **Thermoplastic Resins; Plastic Products; Polyethylene** — 2nd consecutive month; **Polypropylene** — 2nd consecutive month (used heavily in making fabrics, yarns, and carpets); **Polystyrene; Propylene** — 3rd consecutive month (used heavily in making polypropylene plastic and other chemicals); **Latex** — 2nd consecutive month (used heavily in coatings, paints, adhesives, and carpets); **Rubber** — 2nd consecutive month; **Styrene** — 3rd consecutive month (used chiefly in making synthetic rubber, plastic resins, and plastic); **Leather; Nylon; Polyester Yarn; Ink; Paint; Diesel Fuel** — 3rd consecutive month; **Gasoline** — 3rd consecutive month; **Fuel Oil** — 3rd consecutive month; **Lubricants; Natural Gas; Petrochemicals** — 2nd consecutive month (numerous petroleum-derived chemicals not specifically identified); **Petroleum Products** — 3rd consecutive month; **Propane** — 2nd time in 3 months; **Wax; Apple Juice;** and **Transportation Charges** — 2nd consecutive month (surcharges added to existing rates for truck, rail, and air freight charges as a consequence of significant increases in transportation fuels).

DOWN IN PRICE

Aluminum Scrap; Magnesium — 2nd time in 3 months (used heavily as a constituent of light alloys for manufacturing precision instruments); **Platinum** — 2nd time in 3 months; **Zinc** — 3rd consecutive month; **Lumber** — 5th consecutive month; **Corrugated Shipping Containers** — 9th consecutive month; **DRAMS** — 5th consecutive month; **Cheese; Corn** — 3rd consecutive month (used heavily in both food processing and papermaking); **Corn Sweeteners** — 2nd consecutive month (used heavily in making sweeteners, starches, and alcohol); **Milk; Sugar** — 3rd consecutive month; and **Orange Juice** — 2nd consecutive month.

BUYING POLICY

Overall buying policy did not change in October. The average lead times for Capital Expenditures remained unchanged from September at 143 days. The average lead times for Production Materials in October was 46 days, the same as last month. The average lead times for Maintenance, Repair, and Operating (MRO) Supplies was 23 days, unchanged from September.

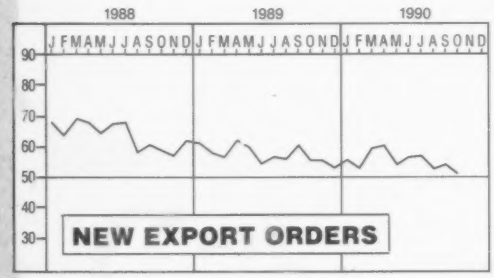


PERCENT REPORTING

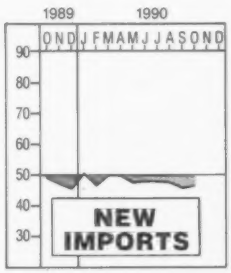
Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
October	12	7	12	24	28	17	143
September	12	8	12	19	34	15	143
August	13	5	14	23	29	16	141
July	14	4	13	22	33	14	139

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
October	20	39	26	12	2	1	46
September	19	42	24	12	2	1	46
August	20	37	29	10	3	1	48
July	20	38	28	10	2	2	49

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
October	46	41	10	3	0	0	23
September	42	48	7	3	0	0	23
August	46	40	10	3	1	0	25
July	43	44	11	2	0	0	23



New Exp[illegible]ers continued to increase in October for the 34th consecutive month. However, the New Export Orders Index, not yet seasonally adjusted, only registered 51.0%, the lowest rate of growth since this indicator was initiated in January 1988. The percentage of members exporting dropped to 74%, down slightly from 76% in September.



Imports declined for the sixth consecutive month, although at a lesser rate than in September. The Imports Index, not seasonally adjusted, registered 46.5% in October. This was up a point from 45.5% in September which was the lowest level in nine months (along with December 1989, also 45.5%). The percentage of members importing fell to 75%, down from 81% last month.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
October 1990	74	18	66	16	+ 2	51.0
September 1990	76	20	68	12	+ 8	54.0
August 1990	75	16	74	10	+ 6	53.0
July1990	74	24	66	10	+14	57.0

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
October 1990	75	10	73	17	– 7	46.5
September 1990	81	5	81	14	– 9	45.5
August 1990	77	7	81	12	– 5	47.5
July 1990	76	9	78	13	– 4	48.0

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured [New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices], this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

Economy Declines Further, PMI At 41.3%; New Orders Index Lowest Since May '82

NOVEMBER REPORT

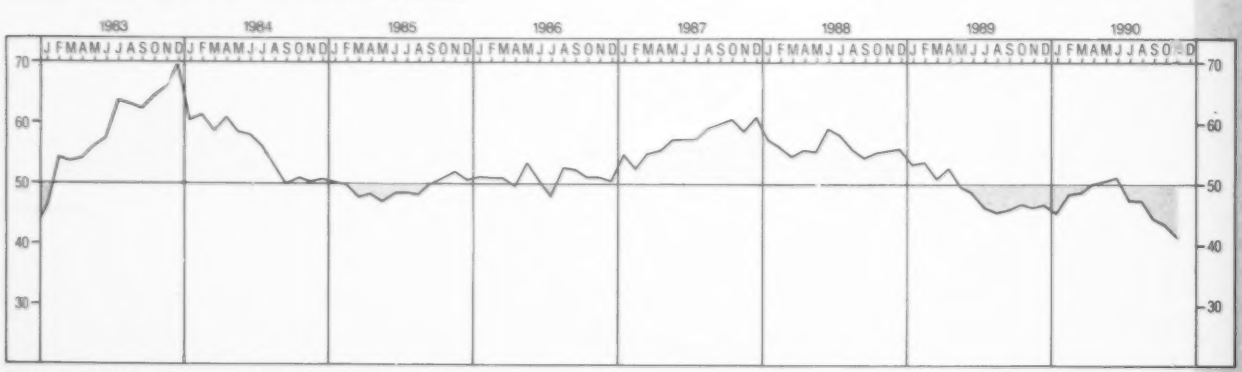
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of materials management, Pitney Bowes, Inc.

The The U.S. economy declined further in November for the second consecutive month, say the nation's purchasing executives in their latest **Report on Business.** The Production Index declined for the fourth consecutive month and is the lowest since September 1982. The New Orders Index declined sharply in November for the fifth consecutive month to the lowest since May 1982, during the previous recession. New Export Orders increased significantly in November, but Imports declined sharply for the seventh consecutive month.

Supplier Deliveries were faster in November for the third consecutive month, but just barely. Inventories declined for the 24th consecutive month at about the same rate as in October. The Employment Index declined for the 21st consecutive month at the greatest rate in eight years. Prices increased in November again largely as a consequence of the Middle East crisis, but the rate of increase dropped sharply from October, a sign that the Middle East crisis-related inflation may have peaked last month.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of corporate purchasing at Pitney Bowes, Inc. Said Bretz, "The negative growth in the U.S. economy, registered in October for the first time in 10 years, has deepened in November. Almost all the indicators confirmed the decline in growth with the exception of Export Orders, which continues to support the economy from even greater decline. Nevertheless, with the engine of the economy, New Orders, at its lowest point in over eight years, it appears likely the negative trend will continue for some time."

PURCHASING MANAGERS' INDEX



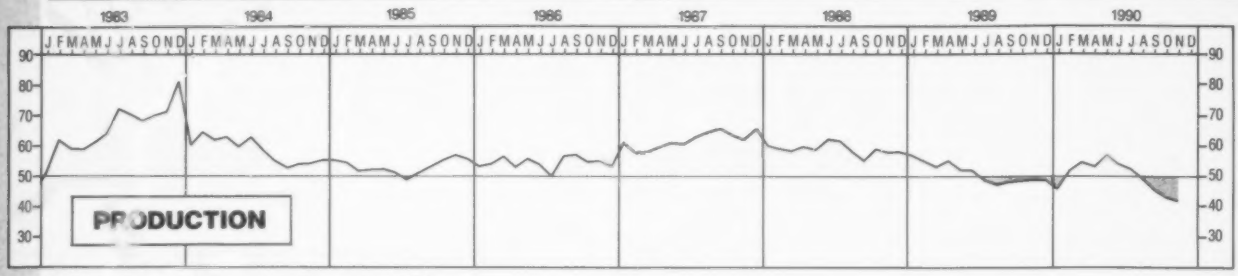
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

November '89	46.4	June '90	51.1
December '89	46.7	July '90	47.4
January '90	45.2	August '90	47.0
February '90	48.3	September '90	44.4
March '90	48.8	October '90	43.4
April '90	50.2	November '90	41.3
MAY '90	50.7		

The **Purchasing Managers' Index** (PMI) declined more than two points to 41.3% in November, the fifth consecutive decline. The 41.3% marked the lowest this leading indicator has been since the trough of the previous recession, November 1982 (39.2%). A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. However, for the entire economy to indicate a decline, the PMI would have to fall below 44%, a level it has been at for two consecutive months. Bretz added, "If the PMI remains unchanged at the November level for December, then past experience indicates this would be consistent with real GNP growth of approximately 0.9% for all of 1990 and a decline in the fourth quarter real GNP of approximately 0.6%."

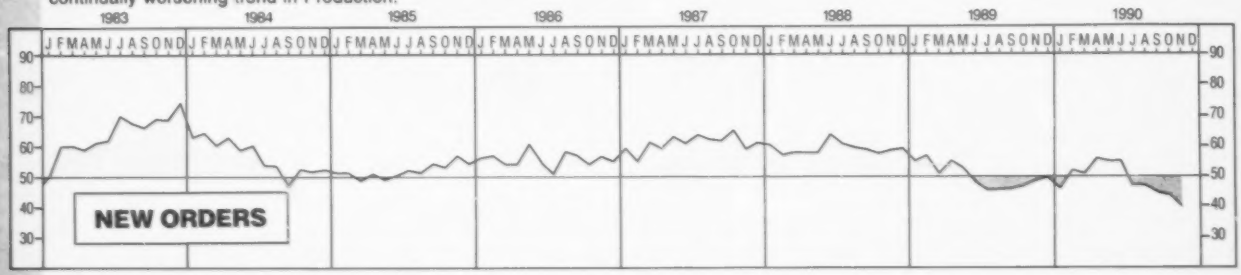
BUSINESS



Peak — July 1981; Trough — November 1982.

The Production Index fell for the fourth consecutive month to 41.8%, down from 43.0% in October. The 41.8% is the lowest this indicator has registered since September 1982 (41.3%) during the previous recession. Considering that the New Orders Index is the weakest in over eight years, it is unrealistic to expect a reverse soon in the six-month continually worsening trend in Production.

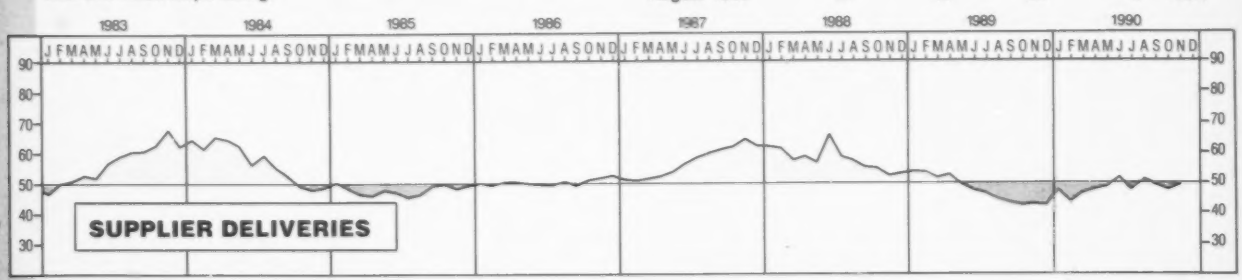
Production	%Better	%Same	%Worse	Net	Index
November 1990	16	49	35	–19	41.8
October 1990	17	52	31	–14	43.0
September 1990	23	48	29	– 6	45.1
August 1990	20	54	26	– 6	48.5



Peak — July 1981; Trough — November 1982.

New Orders declined in November for the fifth consecutive month. The New Orders Index fell to 39.4%, a sharp drop from 43.8% in October. The 39.4% is the lowest since May 1982 (38.1%), which was the tenth month of the previous recession. The economic decline will not bottom until this index stops falling.

New Orders	%Better	%Same	%Worse	Net	Index
November 1990	18	39	43	–25	39.4
October 1990	19	47	34	–15	43.8
September 1990	23	47	30	– 7	44.5
August 1990	21	49	30	– 9	46.4



Peak — July 1981; Trough — November 1982.

Supplier Deliveries were faster in November for the third consecutive month, although at a lesser rate than in the two previous months. The Supplier Deliveries Index rose to 49.6%, from 47.8% in October.

Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
November 1990	9	80	11	– 2	49.6
October 1990	9	79	12	– 3	47.8
September 1990	7	85	8	– 1	49.4
August 1990	7	87	6	+ 1	51.1

IN SHORT SUPPLY

Acetate Filter — 2nd consecutive month (used in making filter-tip cigarettes); **Aluminum Foil** — 2nd consecutive month; **Bearings** — 28th consecutive month; **Castings** — 3rd consecutive month; **Caustic Soda/Soda Ash** — 42nd consecutive month; **Methyl Ethyl Ketone (MEK)** — 3rd consecutive month (used heavily as a chemical solvent in surface coatings, and making resins); **Propylene** — 2nd consecutive month; **Propylene Glycol** — Used as a nontoxic antifreeze, a solvent for pharmaceuticals, a substitute for ethylene glycol, an emulsifier in foods, and in making synthetic resins; **Propylene Oxide** — Used heavily in preparation of polyethers to form polyurethanes, propylene and dipropylene glycols, lubricants, surfactants, and oil demulsifiers; **Xylene** — 2nd consecutive month (used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes; **Textile Dyes**.

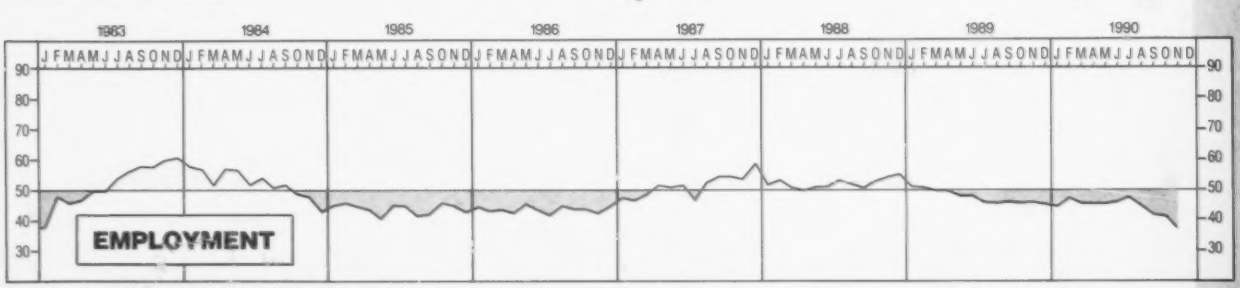
UP IN PRICE

Acetaminophen — 2nd consecutive month (used in analgesics, and making azo dyes and photographic chemicals); **Antifreeze** — 3rd consecutive month; **Ammonia** — 2nd consecutive month; **Benzene** — 3rd consecutive month; **Caustic Soda/Soda Ash** — 48th consecutive month; **Ethylene** — 3rd consecutive month (used heavily in making ethylene oxide, plastic resins, and glycols); **Methanol** — After being reported down in price in September for the 4th consecutive month; **Methyl Ethyl Ketone (MEK)** — 3rd consecutive month; **Solvents** — 4th consecutive month; **Sulfur** — 3rd consecutive month; **Sulfuric Acid** — 3rd consecutive month (used heavily in making fertilizers, dyes, adhesives, and other acids); **Toluene** — 3rd consecutive month (used heavily in making explosives, dyes, and benzoic acid, as a solvent in paint and as a gasoline additive); **Xylene** — 3rd consecutive month (used heavily in making benzoic acid, phthalic anhydride, polyester fibers, and dyes); **Phenol** — 2nd consecutive month; **Plastic Resins** — 3rd consecutive month; **Polyethylene** — 3rd consecutive month (used heavily in making plastic packaging materials, kitchenware, tank and pipe linings, paper coatings, and textile stiffeners); **Polypropylene** — 3rd consecutive month (used heavily in making plastic fabric, yarns, carpets, and packaging materials); **Polystyrene** — 2nd consecutive month; **Polyvinyl Chloride (PVC)**; **Propylene** — 4th consecutive month (used heavily in making polypropylene

Peak — July 1981; Trough — November 1982.

Inventories declined in November for the 24th consecutive month at almost the same rate as in October. The Inventories Index rose to 42.3%, up slightly from 42.0% last month. Purchasers seem bent on lowering their inventory-to-sales ratio even further as manufacturers ride out the decline in sales.

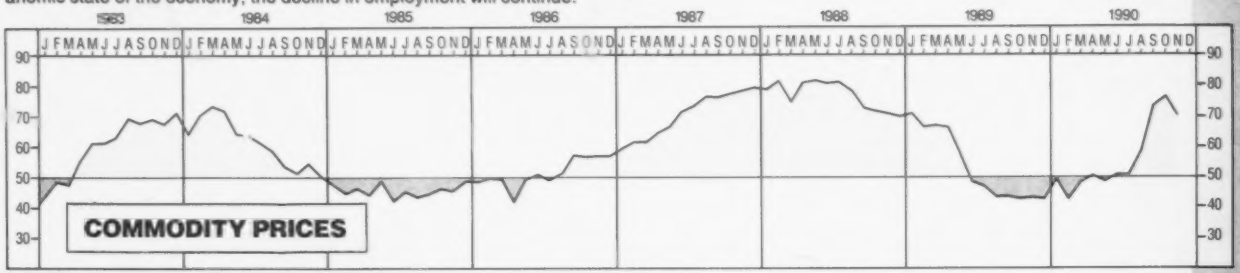
Inventories	%Higher	%Same	%Lower	Net	Index
November 1990	12	54	34	–22	42.3
October 1990	14	53	33	–19	42.0
September 1990	12	59	29	–17	40.8
August 1990	16	57	27	–11	44.1



Peak — July 1981; Trough — November 1982.

The Employment Index fell to 36.7% in November, a sharp four point drop from October (40.7%) and the lowest since December 1982 (36.3%). Numerous members reported actions taken to reduce employment, including layoffs, plant closings, reductions through attrition and hiring freezes, and voluntary early retirement programs. Given the anemic state of the economy, the decline in employment will continue.

Employment	%Higher	%Same	%Lower	Net	Index
November 1990	5	62	33	–28	36.7
October 1990	9	63	28	–19	40.7
September 1990	8	65	27	–19	41.5
August 1990	9	68	23	–14	44.1



Peak — July 1981; Trough — November 1982.

The Price Index registered 68.7%, down from 76.4% in October. With few exceptions, most of the price increases were directly related to the rise in crude oil prices. Purchasers are fiercely resisting price increases. It is likely we have seen the peak in the Middle East crisis-related inflation and that price increases will largely subside in the future.

Prices	%Higher	%Same	%Lower	Net	Index
November 1990	44	46	10	+34	68.7
October 1990	56	38	6	+50	76.4
September 1990	50	44	6	+44	73.4
August 1990	22	68	10	+12	58.2

plastic and acetone, isopropyl alcohol, phenol, propylene oxide, and other chemicals); **Propylene Oxide** — 2nd time in 5 months; **Latex** — 3rd consecutive month; **Rubber** — 3rd consecutive month; **Rubber Products; Styrene** — 4th consecutive month; **Adhesives; Paint** — 2nd consecutive month; **Diesel Fuel** — 4th consecutive month; **Gasoline** — 4th consecutive month; **Fuel Oil** — 4th consecutive month; **Lubricants** — 2nd consecutive month; **Natural Gas** — 2nd consecutive month; **Petrochemicals** — 3rd consecutive month; **Petroleum Products** — 4th consecutive month; **Propane** — 3rd time in 4 months; **Peanuts** — 3rd time in 4 months; **Black Pepper; Transportation Charges** — 3rd consecutive month.

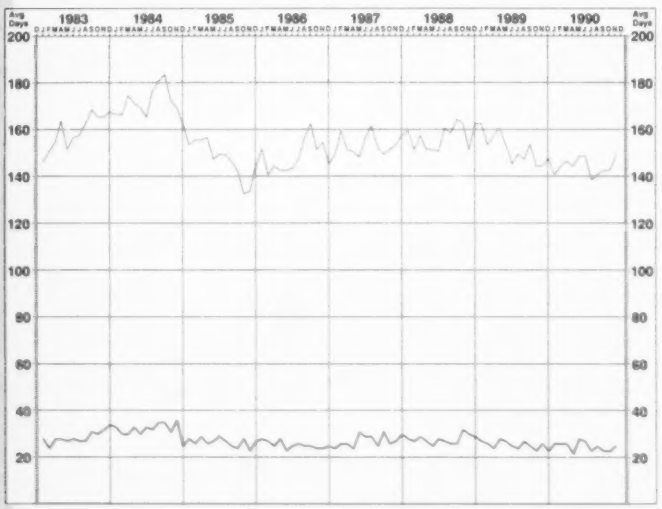
DOWN IN PRICE

Aluminum — After being reported up in price in October, some reports of price increases; **Aluminum Cans; Brass** — After being reported up in price in October; **Copper** — After being reported up in price in October for 7th consecutive month, still some reports of price increases; **Magnesium** — 3rd time in 4 months; **Nickel; Steel Scrap** — After being reported up in price in September; **Tin; Zinc** — 4th consecutive month; **Bearings** — After being reported up in price in August for the 23rd time in 26 months; **Corrugated Shipping Containers** — 10th consecutive month; **Linerboard** — 8th time in 9 months; **Lumber** — 6th consecutive month; **Newsprint; Wood Pulp; Citric Acid** — Used heavily in beverages, jellies, jams, candy, confectionery, and in food processing; **Titanium dioxide** — A lead-free pigment used as a whitener in coatings, paints, paper, and other industrial applications; **Zinc Oxide** — 2nd time in 3 months (used heavily as a pigmentation in paints and inks, in cosmetics, driers, quick-setting cement, and copier paper); **DRAMS** — 6th consecutive month; **Leather; Cheese** — 2nd consecutive month; **Corn Starch** — 2nd time in 3 months; **Corn Sweeteners** — 3rd consecutive month ; **High Fructose Corn Syrup; Orange Juice** — 3rd consecutive month; **Sugar** — 4th consecutive month.

BUYING POLICY

Overall lead times lengthened in November compared to the previous two months. The average lead times for Capital Expenditures in November increased to 149 days, up from 143 days in both October and September. Purchasers noted delays in receiving equipment orders, primarily as a consequence of competing orders from off shore.

The average lead times for Production Materials decreased to 45 days, down from 46 days in October. The average lead times for Maintenance, Repair, and Operating (MRO) Supplies expanded to 25 days, up from 23 days in both October and September and the same as in August.

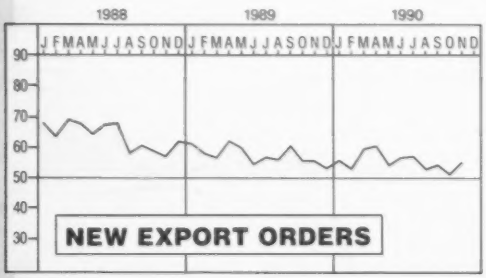


PERCENT REPORTING

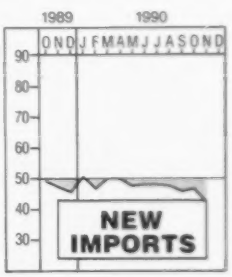
Capital Expenditures	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
November	11	7	13	18	34	17	149
October	12	7	12	24	28	17	143
September	12	8	12	19	34	15	143
August	13	5	14	23	29	16	141

Production Materials	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
November	18	44	26	9	2	1	45
October	20	39	26	12	2	†	46
September	19	42	24	12	2	1	46
August	20	37	29	10	3	1	48

MRO Supplies	Hand to Mouth	30 Days	60 Days	90 Days	6 Mos. and Longer	1 Year + Days	Avg. Days
November	43	45	8	3	1	0	25
October	46	41	10	3	0	0	25
September	42	48	7	3	0	0	23
August	46	40	10	3	1	0	25



New Export Orders increased in November for the 35th consecutive month. The New Export Orders Index, not yet seasonally adjusted, registered 55.0%, up sharply from 51.0% in October, which was the lowest rate of growth since this indicator was initiated in January 1988. The percentage of members was 75%, the average of the past four months.



Imports declined in November for the seventh consecutive month. The Imports Index, not seasonally adjusted, was 42.0%, a sharp drop from 46.5% in October. The 42.0% is the lowest level since this indicator was initiated in October 1989. The percentage of members importing was 76%, up slightly from 75% last month.

New Export Orders	%Exporting	%Better	%Same	%Worse	Net	Index
November 1990	75	21	68	11	+10	55.0
October 1990	74	18	66	16	+ 2	51.0
September 1990	76	20	68	12	+ 8	54.0
August 1990	75	16	74	10	+ 6	53.0

Imports	%Importing	%Higher	%Same	%Lower	Net	Index
November 1990	76	6	72	22	–16	42.0
October 1990	75	10	73	17	– 7	46.5
September 1990	81	5	81	14	– 9	45.5
August 1990	77	7	81	12	– 5	47.5

DATA AND METHOD OF PRESENTATION

The **Report on Business** is based on data compiled from monthly replies to questions asked of purchasing executives in over 300 industrial companies. Membership of the Business Survey Committee is diversified geographically, based on value added by state, and by Standard Industrial Classification (SIC) category, based on each industry's contribution to Gross National Product (GNP). Twenty industries in 50 states are represented on the committee.

Survey responses reflect the change, if any, in the current month compared to the previous month. For each of the indicators measured (New Orders, New Export Orders, Imports, Production, Supplier Deliveries (formerly Vendor Deliveries), Inventories, Employment and Prices), this report shows the percentage reporting each response, the net difference between the number of responses in the positive economic direction (higher, better and slower for Supplier Deliveries), and the negative economic direction (lower, worse and faster for Supplier Deliveries), and the diffusion index.

Responses are raw data and are never changed. The diffusion index includes the percent of positive responses plus one-half of those responding the same (considered positive). The resulting single index number is then seasonally adjusted to allow for the effects of repetitive intra-year variations resulting primarily from normal differences in weather conditions, various institutional arrangements and differences attributable to non-moveable holidays. All seasonal adjustment factors are supplied by the U.S. Department of Commerce and are subject annually to relatively minor changes when conditions warrant them. A sufficient history is not yet available for the New Export Orders and Imports Indexes to determine seasonal adjustment factors. Therefore, these two indexes are not seasonally adjusted. The Purchasing Managers' Index (PMI) is a composite index based on the seasonally adjusted diffusion indexes for five of the indicators (New Orders, Production, Supplier Deliveries, Inventories and Employment) with varying weights applied.

Diffusion indexes have the properties of leading indicators and are convenient summary measures showing the prevailing direction of change and the scope of change. An index reading above 50% indicates that the economy is generally expanding; below 50%, that the economy is generally declining. The distance from 50% is indicative of the strength of the expansion or decline.

Responses to Buying Policy reflect the percent reporting the current months lead time, the approximate weighted number of days ahead for which commitments are made for Production Materials, Capital Expenditures and Maintenance, Repair and Operating (MRO) Supplies, expressed as hand-to-mouth (5 days), 30 days, 60 days, 90 days, 6 months (180 days), a year or more (360 days) and the weighted average number of days. These responses are raw data, never revised and not seasonally adjusted since there is no significant seasonal pattern.

Economic Decline Intensifies; PMI Slips to 40.4%; New Orders and Production Continue to Drop

DECEMBER REPORT

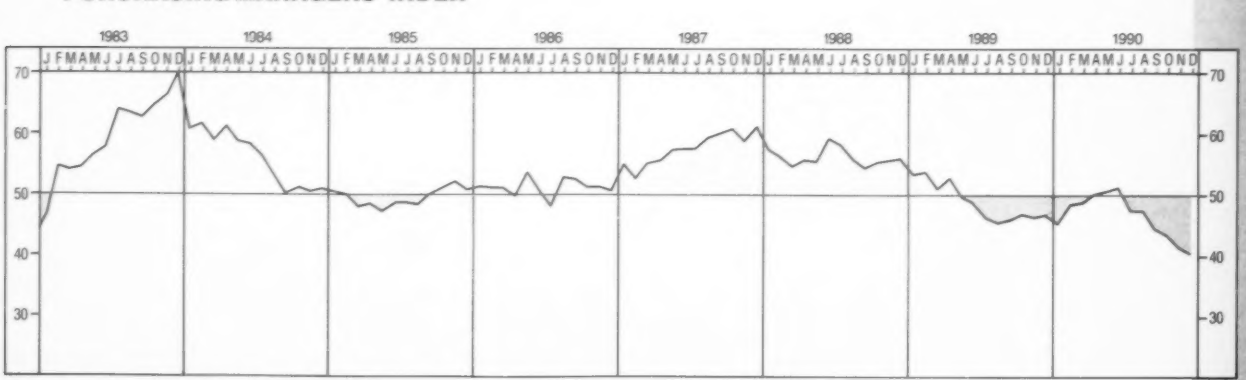
Analysis by the National Association of Purchasing Management Business Survey Committee; chair, Robert J. Bretz, C.P.M., director of corporate purchasing, Pitney Bowes, Inc.

The U.S. economy declined further in December for the third consecutive month, say the nation's purchasing executives in their latest **Report on Business.** The Production Index declined for the fifth consecutive month and is the lowest since August 1982. The New Orders Index also declined further in December for the sixth consecutive month and is at the lowest level since May 1982. New Export Orders continued to grow in December at the same relatively strong rate as November. The Imports Index declined for the eighth consecutive month but at a slightly lesser rate than last month.

The Supplier Deliveries fell for the fourth consecutive month reflecting the significantly lower demand as a consequence of declining production. Inventories declined again in December for the 25th consecutive month as purchasers continued to match lower production with lower inventory. The Employment Index declined for the 22nd consecutive month but at a lesser rate than in November. Although Prices rose again in December for the seventh consecutive month, the rate of increase dropped sharply for the second month in a row, confirming last month's signal that Middle East crisis-related inflation peaked in October.

The **Report** was issued by Robert J. Bretz, C.P.M., chairman of the National Association of Purchasing Management's Business Survey Committee, and director of corporate purchasing at Pitney Bowes, Inc. Said Bretz, "The final quarter of the 1990 economy ended on a somber note; the first declining quarter since the previous recession. Virtually all the indicators satisfied that conclusion with the sole exception of New Export Orders which continues to keep the economy from even further decline. Nevertheless, overall New Orders continues to search for a bottom and, until it finds it, the economy will continue to decline."

PURCHASING MANAGERS' INDEX



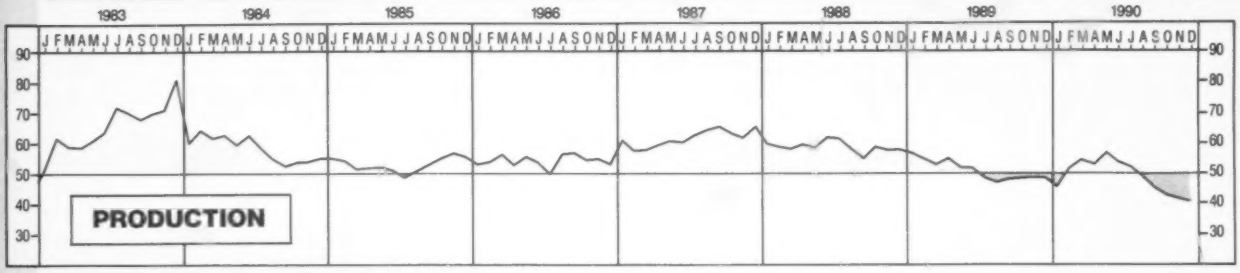
Peak — July 1981; Trough — November 1982.

PURCHASING MANAGERS' INDEX (PMI)

December '89	46.7	July '90	47.4
January '90	45.2	August '90	47.0
February '90	48.3	September '90	44.4
March '90	48.8	October '90	43.4
April '90	50.2	November '90	41.3
May '90	50.7	December '90	40.4
June '90	51.1		

The **Purchasing Managers' Index** (PMI) fell to 40.4% in December, down from 41.3% in November and the lowest since the trough of the previous recession, November 1982 (39.2%). The 40.4% marked the sixth consecutive monthly decline in the manufacturing economy. A reading below 50 indicates that the manufacturing economy is generally declining; above 50, that it is generally expanding. Bretz added, "For the entire economy to indicate a decline, the PMI would have to fall below 44%, which it breached for the entire fourth quarter. The PMI has averaged 46.5% for all of 1990 which, based on past experience, is consistent with real GNP growth of approximately 0.8%. However, the average PMI for the final quarter of 1990 (41.7%) is indicative of a decline in real GNP."

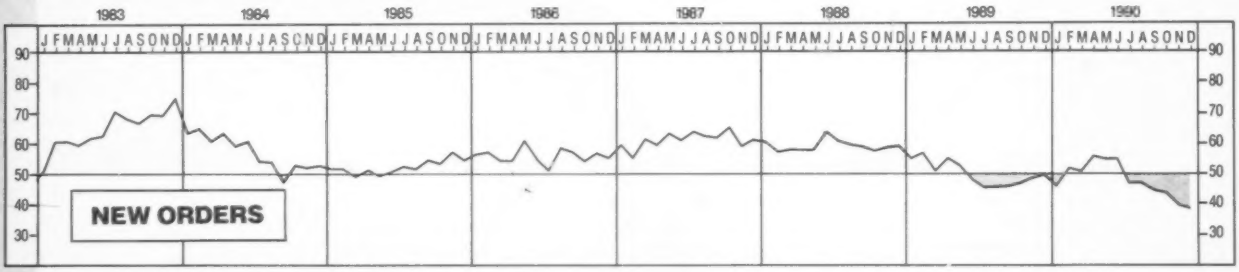
BUSINESS



Peak — July 1981; Trough — November 1982.

Production worsened in December marking the fifth successively steeper monthly decline. The Production Index fell to 40.4% from 41.8% in November and the lowest since August 1982 (39.9%) in the middle of the previous recession. There is only faint hope for any improvement in Production until New Orders improve.

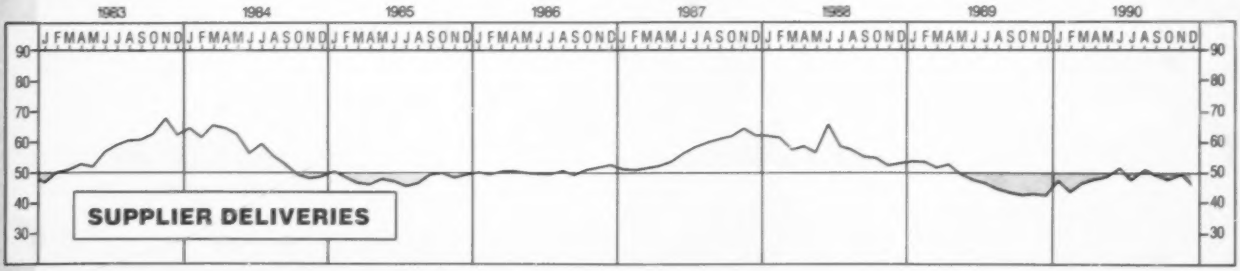
Production	%Better	%Same	%Worse	Net	Index
December 1990	12	53	35	–23	40.4
November 1990	16	49	35	–19	41.8
October 1990	17	52	31	–14	43.0
September 1990	23	48	29	– 6	45.1



Peak — July 1981; Trough — November 1982.

New Orders declined in December for the sixth consecutive month. The New Orders Index fell to 38.3%, down from 39.4% in November and its lowest since May 1982 (38.1%) during the previous recessior.. This engine of the economy must reverse direction before the economy ends its decline.

New Orders	%Better	%Same	%Worse	Net	Index
December 1990	15	40	45	–30	38.3
November 1990	18	39	43	–25	39.4
October 1990	19	47	34	–15	43.8
September 1990	23	47	30	– 7	44.5



Peak — July 1981; Trough — November 1982.

The Supplier Deliveries Index fell in December to 45.9% from 49.6% in November. This marked the fourth consecutive month below 50% and generally indicated suppliers are having less difficulty meeting their requested delivery dates.

Supplier Deliveries	%Slower	%Same	%Faster	Net	Index
December 1990	5	83	12	– 7	45.9
November 1990	9	80	11	– 2	49.6
October 1990	9	79	12	– 3	47.8
September 1990	7	85	8	– 1	49.4

IN SHORT SUPPLY

Acetate Filter — 3rd consecutive month; **Bearings** — 29th consecutive month; **Castings** — 4th consecutive month; **Acetonitrile** — Used to remove tars, phenols, and coloring matter from certain petroleum hydrocarbons, and to extract fatty acids from animal and vegetable oils; **Caustic Soda/Soda Ash** — 43rd consecutive month (used heavily in paper-making, petroleum refining, and soap-making); **Methyl Ethyl Ketone (MEK)** — 4th consecutive month (used heavily as a chemical solvent in surface coatings, and making resins); **Phthalic anhydride** — Used heavily in making artificial resins, benzoic acid, and phthalates; **Propylene** — 3rd consecutive month (used heavily in making polypropylene plastic and acetone, isopropyl alcohol, phenol, propylene oxide, and other chemicals); **Propylene Glycol** — 2nd consecutive month (used as a nontoxic antifreeze, a solvent for pharmaceuticals, a substitute for ethylene glycol, an emulsifier in foods, and in making synthetic resins); **Propylene Oxide** — 2nd consecutive month (used heavily in preparation of polyethers to form polyurethanes, propylene and dipropylene glycols, lubricants, surfactants, and oil demulsifiers); **Textile Dyes** — 2nd consecutive month; **Timber**.

UP IN PRICE

Magnet Wire; Ammonium Nitrate — Used in fertilizers, matches, pyrotechnics, safety explosives, and in making nitrous oxide; **Caustic Soda/Soda Ash** — 49th consecutive month, primarily as a consequence of lower demand for coproduced chlorine by paper makers; **Ethylene** — 4th consecutive month, (used heavily in making ethylene oxide, plastic resins, and glycols); **Industrial Gases; Methanol** — 2nd consecutive month, (used heavily as a solvent, a motor fuel additive, and in synthesizing other chemicals); **Methyl Ethyl Ketone (MEK)** — 4th consecutive month; **Solvents** — 5th consecutive month; **Sulfur** — 4th consecutive month (used heavily in making sulfuric acid, matches, gunpowder, in bleaching wood pulp, and a variety of industrial uses); **Textile Dyes; Plastic Resins** — 4th consecutive month; **Plastic Products; Polyethylene** — 4th consecutive month (used heavily in making plastic packaging materials, kitchenware, tank and pipe linings, paper coatings, and textile stiffeners); **Polypropylene** — 4th consecutive month (used heavily in making plastic fabric, yarns, carpets, and packaging materials); **Propylene** — 5th consecutive month (used heavily in making polypropylene plastic and acetone, isopropyl alcohol,